# Automation 15 - FITB (FQP)



# Copyright note

Be who you want to be, thanks

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# Introduction

We have a way forward in the world of Quark





# ACCA Regression KC (FQP Support)

# 1 Knowledge Section

Test Content



#### **Activity 1: Test Activity**

Colour of Flag

#### Required

What is the colour of the Nigerian Flag?

Solution

# **Activity answers**

**Activity 1: Test Activity** 

Green White Green



# Appendix 1: Formulae, ratios and mathematical tables

## **Appendices**

### Appendix A: Formulae and ratios that you need to learn

**Profitability ratios:** 

$$\mathsf{ROCE} = \frac{\mathsf{Profit}\,\mathsf{from}\,\mathsf{operations}\,(\mathsf{before}\,\mathsf{interest}\,\mathsf{and}\,\mathsf{tax})}{\mathsf{Capital}\,\mathsf{employed}}$$

**Debt ratios** include:

Gearing = 
$$\frac{\text{Value of debt}}{\text{Value of equity (or debt + equity)}}$$

$$Interest\,cover = \frac{Profit\,from\,operations}{Interest}$$

Liquidity ratios:

$$Current ratio = \frac{Current assets}{Current liabilities}$$

Shareholder investor ratios include:

Dividend yield = 
$$\frac{\text{Dividend per share}}{\text{Share price}} \times 100$$

$$Earnings\ per\ share\ (EPS) = \frac{Profits\ after\ tax\ -\ preference\ dividend}{Number\ of\ ordinary\ shares}$$

Price to earnings ratio (P/E) = 
$$\frac{\text{Share price}}{\text{EPS}}$$

#### Working capital ratios

Operating cycle = inventory days + receivable days - payables days

Inventory days = inventory/cost of sales × 365

Receivables days = trade receivables/(credit) sales × 365

Payables days = trade payables/(credit) purchases × 365

Sales to net working capital ratio = sales/net working capital (excl cash)



Cost of capital formulae:

$$K_d = \frac{I(1-t)}{P_0}$$

$$K_p = \frac{d}{p}$$

Other useful formulae to learn:

$$IRR = a\% + \left[ \frac{NPV_a}{NPV_a - NPV_b} \times (b\% - a\%) \right]$$

Total shareholder return =  $\frac{\text{dividend gain} + \text{capital}}{\text{share price at start year}}$ 

$$EAC = \frac{NPV \text{ of costs}}{Annuity factor for life of the project}$$

$$Profitability\ index = \frac{Present\ value\ of\ cash\ inflows\ (or\ NPVof\ the\ project)}{Present\ value\ of\ cash\ outflows}$$

# **Appendix B: Mathematical tables**

**Present Value Table** 



# **Annuity Table**



#### **Formula Sheet**

**Economic Order Quantity** 

$$=\sqrt{\frac{2C_0D}{C_H}}$$

Miller-Orr Model

Return point = Lower limit +  $(\frac{1}{3} \times \text{spread})$ 

Spread = 
$$3 \frac{\frac{3}{4} \times \text{transaction cost} \times \text{variance of cash flows}}{\text{Interest rate}}$$

The Capital Asset Pricing Model

$$E(n) = R_f + \beta_i(E(r_m) - R_f)$$

The asset beta formula

$$\beta_{a} = \left[\frac{V_{e}}{(V_{e} + V_{d}(1-T))}\beta_{e}\right] + \left[\frac{V_{d}(1-T)}{(V_{e} + V_{d}(1-T))}\beta_{d}\right]$$

The Growth Model

$$P_{O} = \frac{D_{O}(1+g)}{(r_{e}-g)}$$
  $r_{e} = \frac{D_{O}(1+g)}{P_{O}} + g$ 

Gordon's Growth Approximation

$$g = br$$

The weighted average cost of capital

WACC = 
$$\left[\frac{v_e}{v_e + v_d}\right] k_e + \left[\frac{v_d}{v_e + v_d}\right] k_d (1 - T)$$

The Fisher formula

$$(1 + i) = (1 + r)(1 + h)$$



Purchasing Power Parity and Interest Rate Parity

$$S_1 = S_0 \times \frac{(1 + h_c)}{(1 + h_b)}$$
  $F_0 = S_0$   $\times \frac{(1 + i_c)}{(1 + i_b)}$ 

# \*\*\*THE DOCUMENT HAS ERRORS\*\*\*

- 1. Error Code: -43 File not found. 0424 Present Value Table.eps
- 2. Error Code: -43 File not found. 0420 Annuity Table.eps